

UNITED STATES GOVERNMENT

~~SECRET~~

2159

## Memorandum

TO : The Files

DATE: March 18, 1965

FROM : John W. Bates, Chemist  
Nuclear Materials Control Branch  
Production DivisionSUBJECT: UNUSUAL INCIDENTS INVOLVING LOSS OF SS MATERIALS -  
DECEMBER 6, 1961 - JANUARY 15, 1965 (u)

OPA:JWB

THIS DOCUMENT CONSISTS OF 6 PAGES  
NO. 1 OF 4 SERIES A

- References:
- a. Memorandum from C. C. Wilson to the Files, dated March 30, 1960, subject "Unusual Incidents Involving Losses of SS Materials - Period 1950 to Date".
  - b. Memorandum from P. F. Brown, dated June 20, 1962, subject "Unusual Incidents Involving Losses of SS Materials - April 1, 1960 - March 31, 1962".

Summaries of subject incidents are presented below as a continuation of the above referenced memoranda:

1961Unaccounted For Part

30. On December 6, 1961, it was determined that a classified special production part, called a "key" was missing at the Y-12 Plant. The "key" was a small item measuring 1.5" x 3/8" and traveled internally from operation-to-operation taped to an IBM batch card. The part's movement was traced to the assembly area and since the IBM batch cards are discarded to the classified incinerator after serving their use, it was theorized that perhaps the part was discarded with the batch card. An analysis of the ashes from the incinerator revealed metal so closely approximating proportions of the part that it was considered the part was inadvertently destroyed. This unusual incident was inadvertently omitted from the memorandum, reference b. above.

DECLASSIFICATION RECOMMENDED

GABRIEL MARCIANTE, ORG CLASSIFICATION OFFICER

Name (ADC) - Organization

4/17/96

Date

with DELETIONS

DECLASSIFICATION AUTHORIZED

MALCOLM THEISEN, EASI

Name (ADD) - Organization

4-22-96  
Date~~RESTRICTED DATA~~

"This document contains restricted data as defined in the Atomic Energy Act of 1954. Its transmission or the disclosure of its contents in any manner to an unauthorized person is prohibited."

GROUP 1: Excluded from Automatic Downgrading  
And Declassification.

~~SECRET~~

000125690

ChemRisk Document No. 2759

19870001780

\* 125690A 001 \*

\* 199600000688 \*

~~SECRET~~

1962

Unusual MUF

31. The March 1962, Y-12 inventory showed an Daffodil deficiency. Two problem areas suspected in the March MUF did not contribute significantly to a gain            kilograms experienced during the following month of April. (See item below.) The March MUF was considered an inventory fluctuation with no indication of actual loss. The FBI was notified but no investigation was requested.

Operational Mishap

32. On April 23, 1962, a misvalving operation occurred in the Chemical Recovery Area of the Paducah Plant which resulted in approximately 1,200 gallons of uranyl nitrate, containing 534 kilograms of normal uranium, valued at approximately \$13,000, being inadvertently dumped into the plant sewer system. In order to prevent a recurrence, a mechanical blank-off was installed in the drain-line and must be removed prior to draining.

MUF

33. The April 1962, Y-12 inventory showed            ]kilogram Daffodil gain and was expected to be more, due to the March MUF experience as discussed in the above item. Various measurement uncertainties associated with the large April in-process inventory were believed responsible. The FY 1962 MUF through April was            ] kilograms, or approximately            ] month which was within previously experienced average deficiencies.

Loss of Uranium Calibration Standard

34. On August 3, 1962, the Y-12 Plant reported a uranium metal calibration standard, measuring 1 3/8" square by 1/16" thick missing from B-2. The metal standard contained product level uranium and weighed 19 grams. It was thought the material had been discarded to the burning ground and a thorough search of the area failed to reveal the missing item. Steps were taken to prevent a recurrence. The FBI was notified but an investigation was not requested.

~~SECRET~~

~~SECRET~~

March 18, 1965

Unusual MUF

35. The September 1962, Y-12 inventory showed [redacted] kilogram Daffodil deficiency. The deficiency was considered an inventory fluctuation, with no identification of any actual loss. This experience, along with that of several recent past years, indicated the necessity for an annual clean-out inventory in the Daffodil Area. A complete clean-out inventory was taken on October 31, 1962.

Loss of Uranium Samples

36. On November 30, 1962, 19 sample bottles, containing 69 grams of uranium oxides and having a total content of one (1) gram of U-235, were presumably shipped from New Brunswick Laboratory (NBL) along with some leased material to Martin-Marietta Corporation, Middle River, Maryland. NBL was notified by the receiver that the package contained the leased material but not the 69 grams of uranium. The premises at both facilities were searched with negative results. The loss was not reported to the FBI.

Unusual MUF

37. The November 1962, Y-12 inventory showed [redacted] kilogram Daffodil deficiency, with [redacted] of this total MUF occurring in the Casting Area. The MUF was not unexpected in light of past experience, with some balance areas following a major clean-out. There was no indication of any loss of identifiable pieces or batches.

Accidental Loss

38. On December 13, 1962, approximately 1,534 kilograms of uranium was lost as the result of an explosion and fire in Building C-337-1-3 at the Paducah Plant.

1963

MUF Fluctuation

39. The January 1963, Y-12 inventory showed [redacted] kilogram Daffodil gain in the SRO, UNH solution processing account. A balance drawn around the SRO campaign in progress at inventory time indicated an over-statement of about [redacted]. This was not reported as an unusual MUF since it was within agreed limits.

~~SECRET~~

Shortage of 2 Drums of Kermac Concentrates

40. On April 22, 1963, Kermac shipped 46 drums (Lot 757) of concentrate to Mallinckrodt Chemical Works (MCW) from its mill at Grants, New Mexico via Navajo Freight Lines. The truck was found to be over-weight at the Missouri border and five drums were removed from the shipment and taken separately by another truck to the St. Louis terminal, where they were reloaded onto the original truck, and the truck load delivered to MCW on April 26, 1963. However, on arrival at MCW only 44 drums could be accounted for. The 2 drums were not located and MCW was advised by Grand Junction Operations to consider Lot 757 as 44 drums. The FBI investigated the alleged loss.

Accidental Spill

41. On May 20, 1963, a bottle of uranyl nitrate solution rolled from a truck bed while being transferred from the Y-12 Plant to the Oak Ridge Gaseous Diffusion Plant (ORGDP). The cap on the plastic bottle broke and 681 grams of uranium, as uranyl nitrate solution, was spilled on the asphalt surface. No material was lost other than that adsorbed in the asphalt. This resulted in a loss of 199 grams uranium containing 93 grams of U-235 and valued at \$934.00.

1964Unusual Inventory Fluctuation

42. The April 1964, Y-12 inventory showed 7 kilogram Daffodil deficiency. A portion of the deficiency was attributed to measurement uncertainties associated with an inventory in Code 77. The FBI was not requested to make an investigation. No identifiable items or batches were involved; it was considered an inventory fluctuation.

Repossession of Depleted Uranium Find

43. On May 8, 1964, the Y-12 Plant repossessed a cylindrical piece of depleted uranium weighing 25,380 grams from Mr. [REDACTED], a local junk dealer. Mr. [REDACTED] stated he found the piece of uranium in the Y-12 Plant Scrap Yard. An investigation was made by the FBI.

**SECRET**

~~SECRET~~

March 18, 1965

Reported Loss of Six Metallographic Specimens at ORNL

44. On June 30, 1964, Mr. H. F. Stringfield, Accountability Representative, Oak Ridge National Laboratory (ORL), reported the disappearance of six metallographic specimens containing a total of 7 grams of uranium of 93% U-235. The metallographic specimens were discovered missing during the June ending inventory in the Metals and Ceramics Division at ORL, and never found. This was not reported as an unusual incident and the FBI was notified for information purposes only.

MUF

45. The September 1964, Y-12 inventory showed \_\_\_\_\_ kilogram Daffodil deficiency. The MUF was attributed to measurement uncertainties associated with a large inventory of concentrated feed solution in Code 77. There was no indication of any loss of identifiable pieces or batches. This was not reported as an unusual MUF since it was within agreed limits.

Repossession of Depleted Uranium Find

46. On October 8, 1964, a rod of extruded depleted uranium 41" long by 3/4" in diameter was found in the possession of Mr. \_\_\_\_\_, a local junk dealer. Mr. \_\_\_\_\_ stated he found the rod in a batch of scrap metal removed from the Y-12 Plant Scrap Yard at the end of September 1964, under an agreement with Mansbach Metal Company of Ashland, Kentucky. The rod was recovered and a complete investigation was made by the FBI of this incident.

Alleged Theft of Uranium From Elza Gate Junk Yard of duPont Smith

47. On November 13, 1964, Mr. \_\_\_\_\_, local junk dealer, advised the FBI that a piece of what he believed to be uranium was stolen from the premises during the night of November 12, 1964. The piece was described as rectangular, about 6" x 8" x 1/2" thick. The junk dealer claimed he found the piece of uranium metal at the Y-12 Plant Scrap Yard. His claim to possession of the uranium piece was not substantiated.

~~SECRET~~

~~SECRET~~

The Files

- 6 -

March 18, 1965

1965

Accidental Loss

48. On January 15, 1965, approximately 1,140 kilograms of 60 atom percent Li-6, as lithium hydroxide, was lost to the storm sewer at the Y-12 Plant. The solution was part of a large volume to be processed to a solid for storage in Building 9201-5. The loss occurred when an emergency transfer was made of the solution in Tank F-206 and the solution was inadvertently allowed to flow to a similar Tank F-202, in which the manhole covers were not secured. In accordance with Chapters 0502 and 0703, a special committee was appointed by the Manager, ORO, to investigate and establish the facts relating to the incident, to collect data and to present their findings, conclusions and recommendations in a report.

*John W. Bates*  
John W. Bates

CC: R. C. Armstrong

~~SECRET~~